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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,978	02/02/2005	Takeyuki Kawase	2005_0060A	4243
52349 7590 06/14/2007 WENDEROTH, LIND & PONACK L.L.P. 2033 K. STREET, NW SUITE 800 WASHINGTON, DC 20006			EXAMINER ARBES, CARL J	
			ART UNIT 3729	PAPER NUMBER
			MAIL DATE 06/14/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/522,978

Applicant(s)

KAWASE ET AL.

Examiner

C. J. Arbes

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 1-6 and 13-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-12 and 23-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>herein</u> . | 6) <input type="checkbox"/> Other: _____  |

Applicants' response to the Office's Restriction Requirement has been carefully reviewed but is held not to overcome the Restriction Requirement. The Requirement is held to have been properly made. In view of this holding and further in view of Applicants' Response thereto the Restriction is now and hereby **made Final**. Applicants therefore are required to cancel all non-elected claims or take other appropriate action.

An Office Action on the merits of claims 7-12 and 23-25 now follows.

Claims 7-12 and 23-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The language in claim 7 which is ...emitting light to a component holder (201) having a component "hold face" (140) of an area not smaller than a light reflection face (141) of a component (312), ..., ... determining whether or not the component holder is good on the basis of a luminance of the component "hold face" in image-pickup information of the component "hold face". And analogous language in said claim 23 is held to be unclear, vague and indefinite because the Office does not understand what is included (or excluded) by said claims. For example what is meant by Applicants' language (in claim 7) emitting light ... of an area not smaller than a light reflection face... . What is a light reflection face? What does the language ... luminance of the component "hold face" mean? What does the language ... determining whether or not the component holder is good...? Applicants are well advised to completely rework these claims or in the alternative to carefully review and carefully articulate what it is that Applicants are trying to delineate for their

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alleged invention. In dependent claims 8-12, 24 and 25 Applicants are also equally unclear as to what they are attempting to include/exclude as part of their invention. The claims recite in a prose-like manner that which Applicants apparently wish to claim as their invention. However the language used is not understandable nor clear and hence these dependent claims are further held to not particularly point out nor distinctly claim the invention.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-12 and 23-25, as understood, are further rejected under 35 U.S.C. 103(a) as being unpatentable over Kawai et al (Pat. No. 6,507,997 B2); hereinafter Kawai et al.

Kawai et al teach a method for mounting an electronic component on a circuit board including moving one of the suction nozzle and an electric component supplying device toward the other of the suction nozzle and the electric component supplying device. An 2 dimensional image is taken of an end portion of a suction nozzle (Cf. Col 10). This image-taking step will used to determine the position of the mounted surface of the component or the nozzle. If in fact Kawai et al do not teach the limitation of determining whether or not a component is good based on the illuminated component's holder i.e. hold face is held to have been obvious to determine if the component's holder is "good" on a basis of the luminance of the component hold face, with the rationale

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being that why would one provide this illumination of the component's holder if determining whether the holder was good. As applied to claims 9-11 it is held to be within the ordinary skill in this art to divide the "hold face" into sections in order to obtain illumination values that are within the range of values that indicate that the component is properly placed on the holder or "hold face". Alternatively it is held that the limitations in these dependent claims 9-11 are mere matters of design choice since there is no particular purpose articulated nor is there any specific problem solved thereby.

Claims 7-12 and 23-25, as understood, are further rejected under 35 U.S.C. 103(a) as being unpatentable over Japan Patent 10163690 A (by Tagata et al.), of Record; hereinafter Tagata et al.

Tegata et al teach a method of identifying a nozzle that are capable of properly mounting components onto Pcb's. Laser beams are directed onto a nozzle . By comparing the luminance that is produced on the face of the nozzles with a standard or reference set of values, one can judge whether the nozzle is able to carry out its intended operation. If indeed Tegata et al do not teach that the light projected is not smaller than the light reflection face of the component then it is held to have been obvious to provide a light source that would provide the luminance for such an area. Although it is not absolutely clear that Tegata et al expressly teach the limitations in dependent claims 9-11, nevertheless for substantially the same reasons as provided above these limitations are either held to have been obvious or in the alternative held to be mere design choice.

Claims 7-12 and 23-25, as understood, is further rejected under 35 U.S.C. 103(a) as being unpatentable over Muraoka et al (Pat. No. 5,854,745; hereinafter Muraoka et al.

Muraoka et al teach a method for mounting electronic components. An image recognizing means is positioned below a transparent panel (Cf. Col 5). Light is emitted from an illuminating means 15 (Cf. Col. 8). On the basis of recognition an error on the glass panel (on which the component is to be mounted) is calculated by the controlling means (70) (Cf. Col 10). The position of the electronic component is recognized by the camera (80). The held electronic component is sent to an auxiliary recognizing means (19) (Cf Col 11) where the position marks of the electronic component are recognized so that held component can be roughly positioned on the glass panel 2. It would have been obvious to provide that the emitting light to the component holder is at least as large as the component holder's area if indeed Muroka et al do not expressly teach this limitation so that the entire component can be judged as to its proper alignment with the glass panel board. With respect to the limitation in independent claim 7 that there is a determination of whether a component is "good" or not, Muraoka et al teach in at least Figure 9 that if the mounting operation is not complete i.e. the component is not "good" then an iteration will occur and the complete operation will begin from the start again. As applied to Claim 8 Muraoka et al the recognizing means will provide the controller with information about the marks on the component as a function of luminance on the component's surface and if the luminance is not sufficient the controller will act to move the component so that the component will be correctly aligned with the proper space on

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the glass panel. Therefore as applied to claim 8 it would have been obvious to provide a setting value based on total luminance etc. As applied to claim 9 it is held that it would have been obvious to divide the hold face of the component's hold face into sections and to monitor each section as to the section's luminance so that accuracy of the mounting process can be achieved. Moreover it is inherent in the controller's construction that differential or infinitesimal sections of component's surface are each monitored to obtain an accurate picture of the process with respect to time. Alternatively it is held that the limitation in claim 9 is mere design choice because there is no particular purpose therefore nor is there any specific problem solved thereby. As applied to claim 25 it is held to have been obvious to use this method for a plurality of component holders inasmuch as the method suggested by this method invention is directed to saving time and increasing accuracy and it is old to mount components by using a plurality of mounting means to mount the components.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. J. Arbes whose telephone number is 571-272-4563. The examiner can normally be reached on M, T, R and F from 8 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, P. Vo, can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



C. J. Arbes  
Primary Examiner  
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